(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 17 March 2005 (17.03.2005)

PCT

(10) International Publication Number WO 2005/024029 A2

(51) International Patent Classification⁷:

C12N 15/82

(21) International Application Number:

PCT/EP2004/052035

(22) International Filing Date:

3 September 2004 (03.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03077811.2

5 September 2003 (05.09.2003) EP

- (71) Applicant (for all designated States except US): CROPDESIGN N.V. [BE/BE]; Technologiepark 3, B-9052 Zwijnaarde (BE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BROEKAERT, Willem [BE/BE]; Kluizenbosstraat 26, B-1700 Dilbeek (BE). FRANKARD, Valerie [BE/BE]; rue de Percke 78, B-1180 Bruxelles (BE). HATZFELD, Yves [FR/FR]; rue des Postes 186, F-59000 Lille (FR). MIRONOV, Vladimir [BE/BE]; Zebrastraat 17, B-9000 Gent (BE).
- (74) Common Representative: CROPDESIGN N.V.; Technologiepark 3, B-9052 Zwijnaarde (BE).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- without international search report and to be republished upon receipt of that report
- with sequence listing part of description published separately in electronic form and available upon request from the International Bureau

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

V

005/024029

(54) Title: PLANTS HAVING MODIFIED GROWTH CHARACTERISTICS AND METHOD FOR MAKING THE SAME

(57) Abstract: The present invention concerns a method for modifying the growth characteristics of plants by modulating expression in a plant of a B-type CDK nucleic acid and/or modulating activity and/or levels in a plant of a B-type CDK protein. The invention also relates to transgenic plants having modified growth characteristics, which plants have modulated expression of a B-type CDK nucleic acid and/or modulated activity and/or levels in a plant of a B-type CDK protein relative to expression, activity and/or levels in corresponding wild-type plants. The present invention also provides a novel screening method for the identification of mutant CDKs having enhanced CDK activity relative to corresponding non-mutated CDKs. The present invention also provides a novel screening method for the identification of non-active CDKs that are able to bind to CKIs (cyclin dependent kinase inhibitors). The invention also provides mutant CDKs obtainable by the screening methods according to the invention.